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EXAMINER	
DIVECHA, KAMAL B	
ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,353

Applicant(s)

DIAS ET AL.

Examiner

KAMAL B. DIVECHA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

PD

Response to Arguments

Claims 1-8 are presented for continued examination.

Applicant's arguments filed May 10, 2005 with respect to claim 1 have been fully considered but they are not persuasive.

Applicant submits that the cited references fail to teach or suggest, *inter alia*, issuing load balancing instructions to said NCS, Examiner disagrees and insists that the cited references in combination explicitly teaches the claimed invention in claims 1-2. Starnes system does issue load-balancing instruction to said NCS (a load balancer, col. 14 L15-36. Starnes Ready message or the appropriately formatted message informs load balancer to start sending requests to server when the congestion at the server is reduced as disclosed by the applicant (applicant spec. pg. 7 L5-13, server informs NCS to do something). The ready message or appropriately formatted message of Starnes is read as an instruction sent by the server to load balancer instructing the server to begin transmitting the requests, without that message, load balancer of Starnes will not transmit requests to server and therefore the ready message is an instruction to the load balancer to start sending the requests. Accordingly, the ready message or appropriately formatted message in Starnes is equivalent to the load balancing instruction as included in claimed invention because the applicant specification discloses the instructions as informative messages informing the NCS to do a job (applicant specification, pg. 7 L5-13).

With further respect to claim 1, applicant submits that the cited references also fail to teach or suggest receiving instructions in said NCS from any said server and complying with instructions upon receipt. Examiner disagrees and cites the passage in Starnes that explicitly

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teaches receiving instructions in load balancer from a server and complying with instructions upon receipt (col. 14 L27-36).

Therefore, the load balancer in Starnes is said to comply with the instruction received from the server.

With respect to claim 2, Examiner disagrees with the applicant arguments and further states that the ready messages of Starnes is obeyed by the load balancer (Starnes col. 14 L27-36, complying with the message upon receipt), therefore every messages or instruction that will be passed to load balancer will be obeyed by the load balancer.

Applicant's arguments with respect to claims 2-8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

I. Claims 7-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

As per claim 7, it discloses a single means claim which covers every conceivable means for achieving the stated purpose is nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor. When claims depend on a recited property, the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983), See MPEP 2164.08(a).

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Claim 8 is rejected due to its dependency on claim 7.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being obvious over Brendel et al. (U. S. Patent No. 5,774,660) in view of Starnes et al. (U. S. Patent No. 6,510,469 B1).

Brendel discloses a method for enhancing load controlling of a web site including a plurality of individual servers (figure 6; col. 2 L54-67) and a network Control Scheduler (NCS) (figure 12; column 18, lines 11-12), said Web site using the Hyper Text Transport Protocol (HTTP) (figure 12), said method comprising the steps of: in any one server out of said plurality of individual servers (column 15, line 12; fig. 6 and fig. 8 item #56 and #70), however, Brendel does not explicitly teach the method comprising the steps of: issuing load balancing instructions

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to said NCS; receiving said load balancing instructions in said NCS from said any one server; and complying with said load balancing instructions upon receipt.

Starnes, from the same field of endeavor, explicitly discloses the method wherein: a server sends the appropriately formatted message to the load balancer (read as server issuing load balancing instruction to a scheduler or load balancer, col. 14 L29-34); receiving said instructions in said NCS from said any one server (col. 14 L34-36; L44-47); and complying with said instructions upon receipt (col. 14 L34-36; L50-53). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Brendel to issue load balancing instructions to said NCS (load balancer), receiving load balancing instructions in said NCS from server and complying with said load balancing instructions in view of Starnes, since Starnes teaches issuing instructions to load balancer, receiving instructions in load balancer and complying with the instructions upon receipt.

One of ordinary skilled in the art would have been motivated because load balancers are provided to enable a component to communicate efficiently with multiples instances of another component and to load balance the computational and operational processing among them (Starnes, col. 13 L44-48).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being obvious over Brendel et al. (U. S. Patent No. 5,774,660) in view of Starnes et al. (U. S. Patent No. 6,510,469 B1), and further in view of Brendel (U. S. Patent No. 6,772,333 B1).

As per claim 2, Brendel ('660) in view of Starnes discloses the process wherein step of issuing instructions includes the step of passing said instructions to said NCS in a NCS-control HTTP header (a http header, col. 14 L29-36 and col. 2 L23-28), said passing step further

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including the steps of: including directives to be obeyed by said NCS (col. 14 L29-36: a message that includes a READY directive or instruction), however, Brendel in view of Starnes does not include the step of optionally including a filter (such as URL, cookie and headers as disclosed by applicant on page 8) to limit the scope of application of said directives. Brendel ('333) from the same field of endeavor discloses the process wherein the header includes a filter (cookie, url, col. 9 L36-56). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Brendel and Starnes to include the filter in the http message to limit a scope of application of directives in view of Brendel ('333), since Brendel teaches that the header of http messages are included with the filter or cookie. One of ordinary skill in the art would have been motivated because it would have enabled load balancing by identifying the server identified by the cookie (Brendel of '333, col. 9 L39-41).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being obvious over Brendel et al. (U. S. Patent No. 5,774,660) in view of Starnes et al. (U. S. Patent No. 6,510,469 B1), in view of Brendel (U. S. Patent No. 6,772,333 B1), and further in view of Pavan et al. (U. S. Patent No. 6,801,943 B1).

As per claim 3, Brendel (of '660) in view of Starnes and further in view of Brendel (of '333) discloses the process wherein said directives includes: NCS-queuing directives (Brendel of '660, col. 14 L5-53), however, Brendel in view of Starnes and further in view of Brendel (of '333) does not disclose the directives such as: flow-control directives and sharing directives. Pavan, from the same field of endeavor, discloses a flow control directive (col. 4 L51-54: read scheduling of packets as flow control mechanism); sharing directives (col. 4 L5-6: scheduler capable of to schedule the use of shared resources); and NCS-queuing directives (col. 4L14-20

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and fig. 6 and col. 5 L23-50). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Brendel, Starnes and Brendel in order to include the flow-control directive, sharing directive, and NCS-queuing directive in view of Pavan, since Pavan teaches flow-control directive, sharing directive, and NCS-queuing directive. One of ordinary skilled in the art would have been motivated because it would have controlled and load balanced the network traffic and improved the network congestion.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being obvious over Brendel et al. (U. S. Patent No. 5,774,660) in view of Starnes et al. (U. S. Patent No. 6,510,469 B1), in view of Brendel (U. S. Patent No. 6,772,333 B1), in view of Pavan et al. (U. S. Patent No. 6,801,943 B1), in view of Millard (Pub. No.: 2002/0087282 A1), and further in view of Subramanian et al. (Pub. No.: US 2002/0194211 A1).

As per claim 4, Brendel (of '660), Starnes, Brendel (of '333) and Pavan does not explicitly disclose the process wherein said flow-control directives include an increase-rate directive to require said NCS to increase a rate at which requests to said any one server are sent; a decrease-rate directive to require said NCS to decrease a rate at which requests to said any one server are sent; an increase-window directive to require said NCS to increase a number of jobs allowed to be simultaneously processed in said any one server; and a decrease-window directive to require said NCS to decrease a number of jobs allowed to be simultaneously processed in said any one server.

Millard teaches the process of increasing/decreasing rate at which requests are sent to the server (pg. 1-2 block #9, pg. 5 block #42-48). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Brendel (of '660),

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Starnes, Brendel (of '333) and Pavan to include the increase and decrease rate directive for increasing and decreasing the a rate at which requests to server are sent in view of Millard, since Millard teaches the process of increasing and decreasing the rate at which requests are sent to the server. One of ordinary skilled in the art would have been motivated because it would have increased or decreased the stress on the target server or machine (Millard, pg. 1-2 block #9).

However, Millard does not disclose the process wherein flow-control directives include an increase-window directive to require said NCS to increase a number of jobs allowed to be simultaneously processed in said any one server and a decrease-window directive to require said NCS to decrease a number of jobs allowed to be simultaneously processed in any one server.

Subramanian, from the same field of endeavor discloses the process of increasing and reducing the number of concurrent requests (read as number of jobs allowed to be processed simultaneously, pg. 11 block #157-159). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Brendel, Starnes, Brendel and Pavan to include the process of increasing or decreasing the number of jobs or requests allowed to be processed simultaneously in view of Subramanian, since Subramanian teaches the process of increasing or decreasing number of concurrent jobs to be processed by a server. One of ordinary skilled in the art would have been motivated because it would have avoided overloading or congestion in the system with too many requests (Subramanian, pg. 11 block #159).

6. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being obvious over Brendel et al. (U. S. Patent No. 5,774,660) in view of Starnes et al. (U. S. Patent No. 6,510,469 B1), in view of Brendel (U. S. Patent No. 6,772,333 B1), in view of Pavan et al. (U. S. Patent No. 6,801,943

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B1), in view of Millard (Pub. No.: 2002/0087282 A1), and further in view of Subramanian et al. (Pub. No.: US 2002/0194211 A1), and further in view of Colby et al. (U. S. Patent No. 6,625,643 B1).

As per claim 5, neither Brendel, Starnes, Brendel ('333), Pavan nor Subramanian disclose the method wherein sharing directives include: a share directive aimed at enabling an information sharing within all members of said plurality of individual servers and said NCS; and a clear directive aimed at clearing a previous said information sharing.

Colby discloses a broadcast manager capable of sending and receiving system messages comprising: a share message for enabling information sharing within all members (col. 3 L32-38, col. 4L54-55, col. 8 L37-51; col. 14 L45-50); and a clear message for stopping or canceling the shared information (col. 15 L15-20; col. 4L43-46). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Colby as stated above with the method and system of Brendel, Starnes, Brendel, Pavan and Subramanian in order to enable information sharing within all members of plurality of servers and clearing a previous said information sharing.

One of ordinary skilled in the art would have been motivated because it would have improved the network latency, reduced or avoided congestion and would have provided higher throughput.

As per claim 6, Pavan discloses NCS-queuing directives including: a lock directive aimed at locking resources identified by said filter (Pavan, read as HOLD directive, col. 5L18-42, fig. 2 item #38) and an unlock directive aimed at releasing previously locked said resources (Pavan, read as RELEASE directive, col. 5L18-42, fig. 2 item #34). Therefore, it would have been

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obvious to a person of ordinary skilled in the art at the time the invention was made to modify Brendel, Starnes and Brendel in order to provide lock directive for locking resources and unlock directive for releasing locked resources in view of Pavan, since Pavan teaches hold and Release directive. One of ordinary skilled in the art would have been motivated because it would have avoided the network congestion by controlling the service requests in a service queued.

As per claim 7 and 8, they do not teach or further define over the limitations in claims 1-6. Therefore, claims 7 and 8 are rejected for the same reasons as set forth in claims 1-6.

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Nace et al., U. S. Patent No. 6,823,380 B1.
- b. Dutta et al., U. S. Patent No. 6,546,423 B1.
- c. Evans et al., U. S. Patent No. 6,061,363.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Flex schedule 8 hr days (10.00am-6.30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 30, 2005.


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER